new jersey department of health and senior services

Guide for EMS: Quick Recognition of Toxic Agents in the Environment

NERVE AGENTS

General: It would be unlikely that only one person (victim) would be involved, more likely there would be multiple victims and there would likely be a difference in number of victims per area depending on distance from the probable source of the toxin. The further one is from the source, the fewer casualties one would expect. Pets, stray or wild animals might also be affected so it would be important to take note of these as well as human victims. There may be odors apparent. With the exception of mustard blistering agents and radiation agents, the effects would be seen immediately.

It is imperative that the rescuer be protected from exposure! In all potential "toxin" exposures the law of distance applies, get the victim as far away from the source of exposure in the fastest time as possible! Generally the dose of the toxin falls off rapidly with distance. The treatment will be supportive and attention to the ABCs is important. Over treatment may produce problems as well as under treatment!

Symptoms: Effects appear almost immediately, will vary from mild to very severe. There would likely be deaths near the source of the exposure.

Sudden collapse, convulsions, muscle fasciculations (contractions), cyanosis, miosis (**small pupils)**, there may be **shortness of breath**, cough, excess nasal secretions (**runny nose**), excess pulmonary secretions, salivation, urination, nausea, vomiting and diarrhea, other victims may complain of headache, muscle weakness, blurred or dimmed vision, there may be the odor of garlic or similar. There may be bradycardia (slow heart rate). *Caution*: The classical SLUDGE, salivation, lacrimation, urination, defecation, gastroenteritis, or the other pneumonic *DUMBBELS*, defecation, urination, miosis, bronchospasm or bronchorrhea, emesis, lacrimation, salivation, was rarely seen in the Tokyo sarin attack.

Treatment: Time is of essence, if it is certain that exposure was to gas, not liquid, there is no need for decontamination. If there is a possibility of liquid, or droplet contamination then clothing should be removed, but should not delay institution of antidotal therapy. If contamination from a liquid, then decon must be started as soon as is feasible once the patient is stabilized.

- Conscious, breathing: if otherwise asymptomatic and only worried about exposure, do not administer antidote

Note: This information was produced in consult with the New Jersey Poison Information and Education System.

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- Conscious, breathing but symptomatic: if any difficult breathing e.g. wheezing, excess secretions, administer antidotal therapy: the atropine part of the Mark 1 kit or 2 mg of atropine (in a child give 0.1 mg to an infant, 0.5 mg up to 2 years, 1 mg from 2-10, above 10 treat as adult), repeat atropine every 3-5 minutes as needed. **Presence of tachycardia is not a contraindication for atropine!**
- Unconscious, convulsing or post-ictal (recovering from a convulsion), not breathing or with symptoms of two or more organs: administer atropine 4 mg immediately (in a child may use less but not less than 1 mg unless a very small child) repeat dose every 3-5 minutes

2-Pam, pralidoxime, to be administered when time allows, either as the second part of the Mark 1 kit or as a dose of 500 mg/hr.

For further help call: POISON Help™ 1-800-222-1222

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